

CLAIMS

1. Drive housing for machine tool drives, comprising a plurality of segments stacked in a stacking direction, cut out from flat material and extending in stacking planes transversely to the stacking direction, each of said segments having continuous material web systems extending in such a manner that segments following one another in stacking direction abut on one another with their material web systems, thereby forming overlapping surfaces, connected to one another areally and with a material fit in the area of their overlapping surfaces.
2. Drive housing as defined in claim 1, wherein the segments are connected to one another with a material fit by means of an areal solder layer.
3. Drive housing as defined in claim 1, wherein at least in the case of some of the segments the material web systems have cutouts passing through the segments over their entire thickness.
4. Drive housing as defined in claim 1, wherein the material web systems enclose the cutouts at least partially.

5. Drive housing as defined in claim 1, wherein receiving cutouts are provided in the segments, said cutouts forming a recess for accommodating a machine tool element, said recess extending over the segments in the stacking direction within the drive housing.
6. Drive housing as defined in claim 5, wherein the recess formed by the receiving cutouts extends through the entire drive housing.
7. Drive housing as defined in claim 1, wherein some of the segments have wall webs surrounding the receiving cutouts, said wall webs having overlapping surfaces connected in stacking direction to preceding and subsequent material webs with a material fit and forming a wall surrounding the recess with an improved heat conduction in the area of the wall webs.
8. Drive housing as defined in claim 7, wherein the wall webs form a wall separating the recess from a cooling medium.
9. Drive housing as defined in claim 7, wherein the wall webs have in the stacking planes a width varying along the same by less than a factor of two.
10. Drive housing as defined in claim 7, wherein the wall webs extend at least over part of the circumference of the receiving cutout.
11. Drive housing as defined in claim 7, wherein the wall webs have an outer contour facing away from the receiving cutout, the course of said outer contour essentially following that of an inner contour facing the receiving cutout.

12. Drive housing as defined in claim 7, wherein segments with supporting webs follow in stacking direction on both sides of a segment with a wall web, said supporting webs being designed to be broader than the wall webs in the stacking planes.
13. Drive housing as defined in claim 12, wherein a segment with a wall web is located between two segments with a supporting web.
14. Drive housing as defined in claim 1, wherein the sum of the material web systems connected areally to one another in the overlapping surfaces forms a spatially continuous, self-supporting supporting framework for the machine tool drive.
15. Drive housing as defined in claim 14, wherein the drive housing has material webs forming the supporting framework, said webs being of a broader design in comparison with other material webs in the stacking planes and being arranged so as to extend in main load directions.
16. Drive housing as defined in claim 5, wherein the receiving cutout of at least one of the segments forms a bearing seat for a bearing of the machine tool drive.
17. Drive housing as defined in claim 16, wherein the bearing seat is formed by the receiving cutouts of several segments and at least some of these segments form wall webs having an improved flow of heat.

18. Drive housing as defined in claim 1, wherein at least one of the segments forms a supporting surface for the drive housing with its outer contour.
19. Drive housing as defined in claim 1, wherein at least one of the segments forms a position-determining element of the drive housing.
20. Drive housing as defined in claim 1, wherein at least some of the segments have cooling channel cutouts forming at least one cooling channel section of a cooling channel system extending through the drive housing.
21. Drive housing as defined in claim 20, wherein the cooling channel cutouts of segments following one another in stacking direction form cooling channel sections extending through the drive housing with deviations.
22. Drive housing as defined in claim 18, wherein the cooling channel sections extend through the drive housing with multiple deviations.
23. Drive housing as defined in claim 20, wherein the cooling channel section extends approximately in a direction transverse to the axis of the stack.
24. Drive housing as defined in claim 23, wherein the cooling channel section has meanders extending in the direction of the stacking direction and alternates between the cooling channel cutouts of at least two segments.

25. Drive housing as defined in claim 23, wherein the cooling channel section extends transversely to the stacking direction in certain sections in one segment and is closed in stacking direction by the material web systems of the preceding and the next following segment.
26. Drive housing as defined in claim 23, wherein the cooling channel section changes during the course of its extension transversely to the axis of the stack at least from one segment into the next following segment and then back into the one segment.
27. Drive housing as defined in claim 20, wherein some of the segments have cooling channel cutouts supplementing one another to form a cooling channel section extending in stacking direction.
28. Drive housing as defined in claim 27, wherein the cooling channel cutouts supplement one another in the segments to form a cooling channel section extending in stacking direction but having at least one meander transverse to the stacking direction.
29. Drive housing as defined in claim 28, wherein the cooling channel section has a shape bent in the stacking planes.
30. Drive housing as defined in claim 28, wherein the cooling channel section has meanders extending transversely to the stacking direction.
31. Drive housing as defined in claim 1, wherein at least in the case of some of the segments the material web systems are produced from a hardenable material.

32. Drive housing as defined in claim 31, wherein the material web systems are produced from a material hardenable following production of the drive housing.
33. Drive housing as defined in claim 32, wherein the material is capable of being hardened by way of induction hardening.
34. Drive housing as defined in claim 1, wherein the drive housing has a guide surface for a movable machine element, said guide surface being formed by at least one segment.
35. Drive housing as defined in claim 34, wherein the guide surface extends in stacking direction over several segments.
36. Drive housing as defined in claim 34, wherein the guide surface is formed by a surface of a section of the material web system of the respective segment.
37. Drive housing as defined in claim 34, wherein the surface is located in the area of an outer contour of the respective segment.
38. Drive housing as defined in claim 34, wherein the guide surface is formed by the surface of a narrow side in a section of the respective material web system.
39. Drive housing as defined in claim 38, wherein the section of the material web system is hardened.

40. Drive housing as defined in claim 34, wherein the guide surface is a hardened surface.
41. Drive housing as defined in claim 40, wherein the guide surface has a hardening progression essentially constant in stacking direction.
42. Drive housing as defined in claim 34, wherein the guide surface is a sliding guide surface.